

*Description of a new Genus, and of several new species of fresh water fish, indigenous to the United States. By C. A. LE SUEUR.—Read, December 19th, 1820.*

Messrs. Maclure, Ord, and Say, from their voyage to Florida, and Mr. Nuttall, in his last journey up the river Arkansa, brought back with them several species of fish, which it is my desire to communicate to this society. Several of them are undescribed, and one of them appears to constitute a new genus, allied to *Cyprinodon*; if we may admit for distinctive character the form of the body, that of the fins, their position, and particularly that of the anal one placed exactly between the ventral fins; the last of which characters appears to me of peculiar importance; it has likewise four or five branchial rays, and the remarkable teeth of *Cyprinodon*, whether or not they exist in the pharynx, as in that genus, I have not been able to ascertain.

The other species of fish which form the subject of this memoir appertain to the genus *Pœcilia*, of Schneider, and *Lebia* of Cuvier.

I would here observe generally, that all these species possess a form of body sufficiently similiar among themselves; that they are all of small magnitude, with the body and neck compressed and elevated anteriorly; the tail compressed, and wide in proportion, but narrower than the anterior part of the body taken between the back and the ventral fin; the head is flattened and terminated by a cuneate snout, cleft crossways by the mouth, of which the jaws are protractile.

## GENUS.—\*MOLLINESIA.†

*Essential Character.*

Head flat; operculum large; branchial rays, or gills, four or five. Jaws flattened; mouth horizontal, very small, furnished with small and slender teeth, anteriorly hooked, and with minute posterior ones resembling velvet. Body short, thick, and compressed. Anal between the ventral fins.

Fish of small size indigenous to North America and inhabiting fresh water.

## M. \*LATIPINNA. Pl. 3, fig. 1.

DESCRIPTION.—Dorsal fin very large, longer than broad, prolonged behind, caudal fin rounded; blackish spots upon the scales; anal fin situated exactly between the ventral, and originating immediately under the dorsal.

Body compressed, short, thick, and most elevated anteriorly. Head flat, horizontal; snout short, cuneiform, opening of the mouth transverse; jaws protractile, furnished with small teeth, anteriorly hooked, posterior ones minute and resembling velvet. Four or five branchial rays. Scales upon the operculum; the head, and the upper part of the body, large. Eyes situated near the summit of the head, distant, the color of a terra sienna yellow, with golden reflections.

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† In honor of Monsieur Mollien, French Minister of Finance, a man of science, and one of the patrons of the celebrated Peron.

Scales posteriorly spotted with black, forming interrupted lines. Dorsal fin ornamented with black spots between the divisions of the rays, and with several longitudinal bands towards their base.

The individual being in spirit of wine, I have not been able to judge of the natural color, but Mr. Nuttall, who saw and collected it living, says, that it exhibits a brilliant reddish golden tint.

B. 4 or 5.—P. 16.—D. 11.—V. 16.—A. 6.

Entire length two inches and half. Height taken from the base of the dorsal fin eight lines. Height of the tail five lines. HAB. In the fresh-water ponds in the vicinity of New-Orleans. Very common.

GENUS.—*PEECILIA*. *Schneider*.

Jaws flattened horizontally, slightly cleft, furnished with a range of small and very slender teeth. The upper part of the head flat: operculum large, rays 3. The body somewhat elongated. Ventral fins a little distant, the dorsal under the anal.

Small fish inhabiting the fresh waters of America.

P. \**MULTILINEATA*. Pl. 1. fig. 1.

Dorsal fin small, longer than high, under the anal; lines and black spots forming as many small bands and passing through the limits of each row of scales; caudal fin straight.

DESCRIPTION.—Total length about four times that of the head; the depth about one head. Body compressed, wider towards the operculum, and much

compressed towards the tail, which is high, with a short and truncated fin. Dorsal fin about twice its height in length. Pectoral middle sized, placed about mid-way between the eye and the abdomen. Eyes large, placed near the summit of the head, and approaching the point of the snout, which is cuneiform seen in profile, flat, and wide seen from above. Operculum large, and open in all its length as far as immediately under the eye. The opening of the mouth very small. The teeth of the jaws small, curved, and closed, moveable, and forming a single range in each jaw; the upper jaw as in the *Lebias*, appearing to be formed by the intermaxillary bone. Inferior maxillary bones projecting forward, and disposed in an horizontal line. Head flat, and as well as the gill-covers, the snout, and the sides of the body, covered with large scales. The scales themselves are middle sized, rounded, and concentrically lined.

Color a deep brown-red.

B. 4 to 5.—A. 16.—D. 14.—V. 6.—A. 9.—C. 26.

This small species, of which the individual above described, measured one and a half inches, was brought in the collections of Messrs. Maclure, Ord, and Say, from East Florida, and is indigenous to the rivers of that country.

GENUS.—*LEBIA*. *Cuvier*.

Character similar to *Pœcilia*, with the exception of branchia of 5 rays, and denticulated teeth.

## L. \*ELLIPSOIDEA. Pl. 2, fig. 1—3.

Body compressed and deep ; dorsal fin higher than long, rounded above the ventral ; a large scapular scale.

Total length of the body three and a half times that of the head, by one and a half in depth. Snout short, jaws very protractile and narrow, armed with compressed and curved teeth, each terminated by three or four points. Head flattened above, between the eyes ; the greatest thickness of the body is between the opercula, very compressed towards the tail. The opercula are large and strong, and without denticulation. Eyes large, approaching the end of the snout, and placed at the summit of the head. Anterior lamina of the operculum, scaly, posterior lamina even, perhaps deciduous. The scales which cover the body are large, and more truncated than rounded, marked with concentric lines. A large scale upon the head between the eyes, surrounded with lesser ones near to the point of the snout. Dorsal fin high, rounded, placed above the ventral, abdominal fins very small, their extremity touching the anal ; the anal fin small and round ; pectoral middle-sized, the extremity prolonged to half the length of the ventral ; caudal mostly unequal, enlarged and elongated posteriorly, and obliquely truncated.

Color a very deep brown.

OBSERVATIONS — There is a membrane attached to the base of the scapular scale, and to the opercu-

lum, closing the opening of the branchia to prevent their too widely separating.

This small species appertains to the genus *Lebia* of Cuvier by its denticulated teeth, and by its possessing four or five branchial rays. It was collected in East Florida, and brought by the party of Messrs. Maclure, Ord and Say. The figure represents the natural size.

B. 4 to 5.—P.—D. 11.—V. 6.—A. 10.—C. 20.

The small fish to which I now call your attention, apparently occupies a place between the Genus *Saurus* and *Scopeles* of Cuvier. The individual here described, is from thirteen to fourteen lines in length, with the body compressed as in the herrings, and having in common with them, the argentine color of the abdomen, with the back of a deep blue. The snout, or terminating portion of the head, is very short, and truncated; the opening of the mouth oblique, the cleft not passing beyond the parallel of the eye; the maxillary bones long, and narrow, the inter-maxillary very small, set with minute teeth, the former, and the wings of the palate are equally furnished with them; as well as the rays which form the opening of the gorge; these rays are prolonged before, in such a manner, that the lower ones appear to form the termination of the tongue; the opening of the gills are large, and continued almost to the insertion of the lower maxillary bones.

According to the above character, this small fish ought apparently to be placed between the two genera

already mentioned. By the vomer furnished with small teeth it cannot appertain to *Saurus* nor to *Scopeles*, in which the palate and tongue are smooth. The scales are large, particularly on the sides, and to the lateral line they are higher. Pectoral fin rather large, continued parallel to the half of the dorsal; ventral small, situated between the abdominal and the pectoral; the dorsal fin placed between the pectoral and the anal; the anal between the two dorsal, of which the second is very small and adipose. The tail long and slender, terminated by a slightly forked fin. Eyes rather large, silvery and gilded, situated contiguous to the maxillary bones and the snout.

B. 4.—P. 15.—V. 6.—First D. 10.—Second D. adipose.—A. 20.—C. 20.

OBSERVATIONS.—I have thought proper to offer some observations upon this small fish, as presenting traits of difference from the genus *Saurus* and *Scopeles*; but I am inclined to think, that it may occur of a greater magnitude. The specimen was communicated to me by Mr. T. Nuttall, the botanist, who obtained it in the river Arkansa.

*Description of two new species of Exocetus* By C. A.

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EXO CETUS. *Lin. Cuvier.*

The Flying-fish are distinguished among the abdominals by the uncommon magnitude of their pec-